



School of Civil and Environmental Engineering  
Term 2, 2020  
**GMAT1110 SURVEYING &  
GEOSPATIAL ENGINEERING**

**COURSE DETAILS**

**6**

**Units of Credit**

**Contact hours**

5 hours per week (average)

**Class**

Tuesday, 9:00 11:00

Online via Moodle, BB collaborate  
online

Wednesday, 9:00 11:00

**Workshop**

	and/or in your local park. The scheduled BBCU sessions can be used for live feedback where you can ask me questions and discuss your progress.
Assessment	A mid-term exam and a final exam will be run in online mode. The mid-term exam will be a Moodle quiz. You will be sent an exam paper by email at the start time. You also type your written answers. You email your answers to me before the exam end time. It does not run through Moodle. I am available for questions during the exam time.
My teaching experience	I have taught this course in this mode for many years (with improvements each year). Whilst this is a fundamental course, technology in the Surveying and Geospatial Engineering discipline have changed rapidly in the last 2 decades and this course now presents many new and exciting technologies such as GPS, GIS, Remote Sensing from satellites and UAVs (drones), laser scanning as well as levelling and total stations. I have conducted workshops with students in T1 using BBCU and worked closely with a colleague on another 3 <sup>rd</sup> yr surveying course. I am suitably experienced with BBCU software and hope that students have been using this platform in T1. It appears that BBCU works best with the Chrome browser on PCs, and Safari on iPads.



and engagement in my lectures. A lot of reading and calculation problems outside of lectures using reference material (see below) is expected.

Workshops (formerly known as tutorials) will support the lectures. Workshop questions can be accessed from the class website. This course is computational in nature and it is very important that the student practice all of the workshop problems prior to the workshop sessions. Lecturers will assume that all students attending have attempted the problems. The problems are very similar in nature to the sort of questions you could expect in the final exam. This year, due to Covid-19, some of the important questions have been pre-recorded and will be released after about one week and prior to the class workshop to promote discussion.

Three practical exercises have been set to help the student appreciate how to apply basic surveying techniques to real world situations. This year I have devised both online and field practicals. It is hoped that we will have the opportunity to perform the field practicals this year.

**supporting documentation will be needed in the event that a student misses a field practical.**

**Private Study**

- < Review lecture material and textbook
- < Do set problems and assignments
- <

3.		
4.		

For each hour of contact it is expected that you will put in at least 1.5 hours of private study.

<b>ASSESSMENT</b>
-------------------

**Online practicals:**

The online practicals are designed to be conducted by a single student from their home using desktop tools, free apps loaded onto a smart phone (or similar device) and access to your local park. A non-recorded BBCU session for each prac will be made available by the lecturer for students to ask q0.0000088(ct BM)6(Is)-2(,)-21( g



*Penalties:* The quizzes are usually open for 1 week only. The only penalty is for not finishing in time. The solution is to start early and not leave until the last minute.

*Feedback:* The quizzes have built in feedback.

*Objectives and learning outcomes:* Time management is an important outcome. The questions are designed to exercise theory in an applied way and also under some time pressure.

#### Assessment Criteria for final exam

*Comments:* The final exam covers all material, however students should know that there will be one Levelling and one Traverse question in the exam making up around half of the assessment. This is because both these topics are considered fundamental.

*Marking scheme:* The marks (and part marks) will be listed at the start of each question. The exam is written with a mix of computational and theory style questions. Students should look at how many marks are spend 30 mins on a question worth only 2 marks out of 100!).

*Penalties:* Penalties are in accordance with standard UNSW exam practice.

*Feedback:* Students may contact the lecturer during or after the final exam for individual feedback.

*Objectives and learning outcomes:* The exam is designed to cover the broad range of topics covered in GMAT1110. Some questions will be applied and require the student to use their knowledge to answer a question that may require aspects from various topics within the curriculum. On the whole, questions are very similar to those given in the workshop examples. There are currently no past papers, but a practice exam is used for revision in week 11.

Supplementary Examinations for Term 2 2020 will be held on Monday 7<sup>th</sup> September Friday 11<sup>th</sup> September (inclusive) should you be required to sit one. You are required to be available during these dates. Please do not to make any personal or travel arrangements during this period.

#### **RELEVANT RESOURCES**

**Lecture Material** (check the course website):

<http://moodle.telt.unsw.edu.au>

The Powerpoint lecture slides and other documents are available for download as PDF files at the course website.

Lectures can also be viewed as Echo/ BBCU recordings. Recordings of some workshop questions provided.

Text and Reference Books

**Text book:**

Uren, J & Price, WF. "Surveying for Engineers", 5th edition, 2010

(available in bookshop compulsory to purchase for B Eng(Surveying) and Dual award (3776) students only. Optional s5 842 re( )JTJETQq0.00000887 0 595.25 842 reW\*nBT/F1 10 Tf1 0 0 1 200.8 5 on, 2010

Pocket calculators are required during lecturing hours, for workshops, field practicals as well as exams in this course. They have to be hand-held, internally powered and silent. They must be brought to all lectures and practicals.

Students may bring their own calculators to the exam but they must be approved calculators. The list of "approved" calculators is the same as that published by the Board of Studies NSW at <https://student.unsw.edu.au/exam-approved-calculators-and-computers>

Students must attain a tamper proof sticker from the Engineering Student Centre to guarantee that their calculator is approved for the final exam.

## **PENALTIES**

*Late submissions will be penalised at the rate of 10% per day after the due time and date have expired.*

## **DATES TO NOTE**

Refer to MyUNSW for Important Dates available at:

<https://student.unsw.edu.au/dates>

## **PLAGIARISM**

Beware! An assignment that includes plagiarised material will receive a 0% Fail, and students who plagiarise may fail the course. Students who plagiarise are also liable to disciplinary action, including exclusion from enrolment.

Plagiarism is the use of

and where you found them (giving the complete reference details, including page number(s)). The Learning Centre provides further information on what constitutes Plagiarism at:

<https://student.unsw.edu.au/plagiarism>

## **ACADEMIC ADVICE**

For information about:

- < Notes on assessments and plagiarism;
- < Special Considerations: [student.unsw.edu.au/special-consideration](https://student.unsw.edu.au/special-consideration);
- < General and Program-specific questions: [The Nucleus: Student Hub](#)
- < Year Managers and Grievance Officer of Teaching and Learning Committee, and
- < CEVSOC/SURVSOC/CEPCA

Refer to Academic Advice on the School website available at:

<https://www.engineering.unsw.edu.au/civil-engineering/student-resources/policies-procedures-and-forms/academic-advice>

I hope you enjoy your first journey into the wonderful world of Surveying and Geospatial Engineering

Craig Roberts 18 May, 2020



